QP Code : MV-20141

(3 Hours)   **[Total Marks : 100**

N. B. 1) Question No. 1 is compulsory.

    2) Attempt any four questions out of remaining six questions.

Q.1 a) Define DFD and also draw the data flow graph of following code. (10)

    int binsearch (int x, int v [ ], int n)

       {

          int low, high, mid;

          low=0;

          high=n-1;

          while (low$\leq$high)

       {

          Mid=(low+high)/2;

          If (x<v[mid])

          high=mid-1;

          else

          if (x>v [mid])

          low=mid+1;

           else

             return mid;

       }

       Return -1:

       }

b) Explain McCall's quality factors and criteria.   (10)

Q.2 a) Differentiate the following.   (10)

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1) Black box & white box testing.

2) Verification & validation.

b) Explain the following terms with example.   (10)

  i)failure   ii)error   iii)fault   iv)defect v)verification

Q.3.a)Explain boundary value analysis with the help of an example.   (10)

   b) What is a test oracle? What are the differences between parametric oracle

     & statistical oracle?   (10)

Q.4 a) Explain with suitable example the concept of mutation testing, mutant, mutation score, killable mutant & staburn mutant. What do you mean by equivalent mutant?

b) Differentiate static and dynamic unit testing also explain steps in the code review process.   (10)

Q.5 a) What are the objectives of acceptance testing? What is the difference between UAT and BAT?   (10)

b) What is system Integration testing and what are common approaches to perform system integration.

Q.6 a) Explain test execution strategy in details.   (10)

b) Explain different metrics used in system testing.   (10)

Q.7 a) Explain different views of software quality.   (05)

   b) Explain load testing & stress testing.   (05)

   c) Explain defect life cycle.   (05)

   d) What are zero day attack? Discuss it's significance with respect to

     security testing.   (05)